7 HARVEY ROAD,
CAMBRIDGE.

9/71 Apl. 8th

Dear Fitzgerald

I do not think my X Y Z are necessa

My ether however diff from yours. I think in satisfy for the motions consi the equations of an elastic solid. If we sup the solid strained by

and finally $\mu K = \frac{f}{B}$

I think all the electromagnetic quantities are here expressed in terms of symbols naturally occurring in the motion of the medium and that a strained solid will thus express the state of things in an isotropic dielectric and that we can form a picture of that electric action in

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face actions then I think it follows that A & B are the constants in the ordinary elastic solid eqn viz

$$\rho \frac{d\dot{\xi}}{dt} = A \frac{d}{dx}\left(\frac{d\xi}{dx} + \frac{d\eta}{dy} + \frac{d\zeta}{dz}\right) - B \nabla^2 \xi$$

and the other symbols have their usual meaning in the electromagnetic theory

that ~~the solid being incom~~

$$F = \frac{\mu \dot{\xi}}{2} = \text{electrokinetic momentum}$$

$$8\pi f = \nabla^2 \xi + \frac{d}{dx}\left(\frac{d\xi}{dx} + \frac{d\eta}{dy} + \frac{d\zeta}{dz}\right)$$

$$= \nabla^2 \xi$$ if the solid be incompressible

$$\alpha = \frac{1}{2}\left(\frac{d\dot{\xi}}{dy} - \frac{d\dot{\eta}}{dz}\right)$$

$$-\frac{d\Psi}{dx} = \frac{\mu(A+B)}{2\rho}\frac{d}{dx}\left(\frac{d\xi}{dx} + \frac{d\eta}{dy} + \frac{d\zeta}{dz}\right)$$

= e.m.f due to the polarization

This is not zero if the solid be incompressible for then A is infinite

with another one to what
I referred comparing
Maxwells theory with
that of Helmholtz
What does Sir W. T. mean
by his note in Nature

Yrs v truly
R. T. Glazebrook

9/71

7 HARVEY ROAD,
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terms of the strains in
the solid. I said no more
the other day at the Lab
because I thought you were
objecting to the elastic me-
dium and wanted some
thing to explain its elas
ticity. I doubt if the
thing will work out any
further. crystals seem a

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difficulty but perhaps it may on some kind of assumption as to the action between matter and ether. I don't see how a crystalline ether can be made to do it at all

If the medium be not incompressible and

& better dilatation there & the potential due to the polarization is equal to $\frac{\mu}{2\rho} \cdot \delta$.

and is propagated with velocity $= \sqrt{\frac{A}{\rho}}$ becoming infinite when the medium is incompressible. This corresponds to the normal wave of Helmholtz theory

I send a copy of my paper